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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,018	10/20/2003	Maarten Menzo Wentink	050337-1290 (05CXT0069WL)	4108

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EXAMINER	
TAYLOR, NICHOLAS R	
ART UNIT	PAPER NUMBER
2441	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/689,018	WENTINK, MAARTEN MENZO	
	Examiner	Art Unit	
	Nicholas Taylor	2441	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,17,18,21-23 and 25-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,17,18,21-23 and 25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on February 11th, 2009, has been entered.

2. Claims 1-14, 17, 18, 21-23 and 25-27 have been presented for examination and are rejected.

Response to Arguments

3. Applicant's arguments filed February 11th, 2009, with respect to the claims have been considered but are moot in view of the new grounds of rejection.

Claim Objections

4. Claims 7, 17, and 25 are objected to because of the following informalities: a space exists in the term "802.11". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the claim uses "first interval" instead of "first backoff interval" midway through the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, 4-6, 13, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (U.S. PGPub 2002/0163929).

9. As per claims 1, 13, and 22, Li teaches a method for accessing a shared resource comprising:

sharing a resource between a plurality of stations; (Li, see architecture and shared medium of paragraphs 0032, 0033 and fig. 1)

determining a first backoff interval by measuring an average wait time that one of said plurality of stations incurred during previous access attempts to the shared

resource; and (Li, see overview of paragraphs 0014-0016, fig. 5, and paragraphs 0059-0064, where the backoff interval is determined by measuring an average wait time from previous access attempts)

once it is determined that the one of said plurality of stations desires access to the shared resource and the shared resource first becomes available, preventing the one station from contending for access to said shared resource for an interval equal to the first backoff interval (Li, see paragraphs 0065-0067, and fig. 6, where the station is prevented from contending for access until an interval equal to the first backoff interval has passed).

10. As per claim 2, Li teaches the system further comprising transmitting a frame from the one of said plurality of stations to another station using said shared resource after said first backoff interval has passed, wherein said shared resource is a shared-communications channel (Li, see architecture and shared medium of paragraphs 0032, 0033 and fig. 1, where frames are transmitted after intervals have passed).

11. As per claim 4, Li teaches the system further wherein said backoff interval is further based on at least one of: i) a moving average; and ii) a contention window value (Li, see paragraphs 0059 and 0060).

12. As per claims 5, Li teaches the system further wherein the station is prevented from contending for access to the shared resource for a second random backoff period

beyond said first determined backoff period (Li, see overview of paragraphs 0014-0016, fig. 5, and paragraphs 0059-0064).

13. As per claim 6, Li teaches the system further wherein said second random backoff period can assume a nonzero value only after an unsuccessful attempt to transmit occurs (Li, see overview of paragraphs 0014-0016, fig. 5, and paragraphs 0059-0064).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 3, 7-12, 14, 17, 18, 21, 23, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (U.S. PGPub 2002/0163929) and Singh et al. ("PAMAS – Power Aware Multi-Access Protocol with Signaling for Ad Hoc Networks").

16. As per claims 3, 14, and 23, Li teaches the above, yet fails to teach the system further comprising, after the first backoff period is determined, powering down a receiver circuit in the one of said plurality of stations for at least a portion of said first backoff

interval while the one station is being prevented from contending for access to the shared resource.

Singh teaches a wireless resource sharing system (Singh, sections 1 and 2) that powers down a resource sharing station during intervals in which the station cannot access the resource (see section 2.1 describing IEEE 802.11 nodes that power down when prevented from accessing the resource). Singh additionally teaches the use of the 802.11 protocol specification (section 2.1).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Li and Singh to provide the power saving of Singh in the system of Li, because doing so would allow the use of a power-saving mode that is beneficial for conserving battery power in mobile stations (see Singh, section 2.1 discussing the importance and need for power conservation in devices when transmission cycles are not taking place; see also Conclusion section). Further, one of ordinary skill in the art looking to create a station with the commonly understood benefit of an extended battery life would look to prior art teachings that facilitate intelligent power conservation. Singh, which discloses a shared resource communication system, provides one such predictable solution in the form of an intelligent component power-down when communication is not necessary or not possible.

17. As per claim 7, Li teaches the above, including constraining the backoff to an interframe space (Li, see, e.g., paragraphs 0059-0063), yet fails to teach the system

further wherein said backoff interval is constrained to be at least as long as an IEEE 802.11 distributed interframe space.

Singh teaches a wireless resource sharing system (Singh, sections 1 and 2) that powers down a resource sharing station during intervals in which the station cannot access the resource (see section 2.1 describing IEEE 802.11 nodes that power down when prevented from accessing the resource). Singh additionally teaches the use of the 802.11 protocol specification (section 2.1).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Li and Singh to provide the power saving of Singh in the system of Li, because doing so would allow the use of a power-saving mode that is beneficial for conserving battery power in mobile stations (see Singh, section 2.1 discussing the importance and need for power conservation in devices when transmission cycles are not taking place; see also Conclusion section). Further, one of ordinary skill in the art looking to create a station with the commonly understood benefit of an extended battery life would look to prior art teachings that facilitate intelligent power conservation. Singh, which discloses a shared resource communication system, provides one such predictable solution in the form of an intelligent component power-down when communication is not necessary or not possible.

18. As per claims 8 and 18, Li teaches a system comprising:

a station and an access point communicating over a shared resource, (Li, see architecture and shared medium of paragraphs 0032, 0033 and fig. 1)

said station configured to:

transmit data over said shared resource; receive a first backoff interval value from said access point; once it is determined that the station desires access to the shared resource and the shared resource first becomes available, to refrain from contending for access to said shared resource for a first interval equal to said first backoff interval value; and (Li, see paragraphs 0065-0067, and fig. 6, where the station is prevented from contending for access until an interval equal to the first backoff interval has passed)

power down a receiver circuit for at least a portion of said first interval while the station is being prevented from accessing the shared resource,

said access point configured to:

determine a first backoff interval value by measuring an average wait time that the access point incurred during previous attempts to access the shared resource; and distribute the first backoff interval value to one or more stations (Li, see overview of paragraphs 0014-0016, fig. 5, and paragraphs 0059-0064, where the backoff interval is determined by measuring an average wait time from previous access attempts).

However, Li fails to teach wherein the system powers down a receiver circuit for at least a portion of said first interval while the station is being prevented from access the shared resource.

Singh teaches a wireless resource sharing system (Singh, sections 1 and 2) that powers down a resource sharing station during intervals in which the station cannot access the resource (see section 2.1 describing IEEE 802.11 nodes that power down

when prevented from accessing the resource). Singh additionally teaches the use of the 802.11 protocol specification (section 2.1).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Li and Singh to provide the power saving of Singh in the system of Li, because doing so would allow the use of a power-saving mode that is beneficial for conserving battery power in mobile stations (see Singh, section 2.1 discussing the importance and need for power conservation in devices when transmission cycles are not taking place; see also Conclusion section). Further, one of ordinary skill in the art looking to create a station with the commonly understood benefit of an extended battery life would look to prior art teachings that facilitate intelligent power conservation. Singh, which discloses a shared resource communication system, provides one such predictable solution in the form of an intelligent component power-down when communication is not necessary or not possible.

19. As per claims 26 and 27, Li-Singh teaches the system further comprising powering down the transmitter in the one of said plurality of stations for at least the same portion of the first backoff interval (Singh, see section 2.1 describing IEEE 802.11 nodes that power down when prevented from accessing the resource).

20. As per claim 9, Li-Singh teaches the system further comprising transmitting a frame from the one of said plurality of stations to another station using said shared resource after said first backoff interval has passed, wherein said shared resource is a

shared-communications channel (Li, see architecture and shared medium of paragraphs 0032, 0033 and fig. 1, where frames are transmitted after intervals have passed).

21. As per claim 10, Li-Singh teaches the system further wherein said first backoff interval is further based on at least one of: i) a moving average; and ii) a contention window value (Li, see paragraphs 0059 and 0060).

22. As per claims 11 and 21, Li-Singh teaches the system further wherein the station is prevented from contending for access to the shared resource for a second random backoff period beyond said first backoff period (Li, see overview of paragraphs 0014-0016, fig. 5, and paragraphs 0059-0064).

23. As per claim 12, Li-Singh teaches the system further wherein said second random backoff period can assume a nonzero value only after an unsuccessful attempt to transmit occurs (Li, see overview of paragraphs 0014-0016, fig. 5, and paragraphs 0059-0064).

24. As per claims 17, and 25, Li teaches the above, yet fails to teach the system further wherein said shared resource is a shared-communications channel and wherein said transmitter communicates over said shared-communications channel in accordance with an IEEE 802.11 protocol.

Singh teaches a wireless resource sharing system (Singh, sections 1 and 2) that powers down a resource sharing station during intervals in which the station cannot access the resource (see section 2.1 describing IEEE 802.11 nodes that power down when prevented from accessing the resource). Singh additionally teaches the use of the 802.11 protocol specification (section 2.1).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Li and Singh to provide the power saving of Singh in the system of Li, because doing so would allow the use of a power-saving mode that is beneficial for conserving battery power in mobile stations (see Singh, section 2.1 discussing the importance and need for power conservation in devices when transmission cycles are not taking place; see also Conclusion section). Further, one of ordinary skill in the art looking to create a station with the commonly understood benefit of an extended battery life would look to prior art teachings that facilitate intelligent power conservation. Singh, which discloses a shared resource communication system, provides one such predictable solution in the form of an intelligent component power-down when communication is not necessary or not possible.

Conclusion

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Taylor whose telephone number is (571) 272-3889. The examiner can normally be reached on Monday-Friday, 8:00am to 5:30pm, with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/NT/
Nicholas Taylor
Examiner
Art Unit 2441

/Larry D Donaghue/
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